## REMARKS/ARGUMENTS

The arguments and amendments presented herein include the arguments and amendments Applicants discussed with the Examiner during the phone interview dated June 16, 2009. Applicants submit that the arguments and amendments presented herein make the substance of the phone interview of record to comply with 37 CFR 1.133. If the Examiner believes that further information on the interview needs to be made of record to comply with the requirements, Applicants request the Examiner to identify such further information.

Applicants amend claims 30-33, which depend from claims 1, 11, 19, and 22, to clarify the claim language by reciting that the initiated communication with the remote device comprises sending only one discovery request to the remote device to cause the remote device to perform the gathering, periodically checking, and returning of the remote topology information indicating the downstream devices directly and indirectly connected to the remote device.

Applicants submit that this amendment overcomes the objection on pg. 2 of OA3.


1.      Claims 1-4, 6, 9, 11-13, 15, 16, 18-24, 26, 27, and 29-33  are Patentable Over the Cited Art

The Examiner rejected claims 1-4, 6, 9, 11-13, 15, 16, 18-24, 26, 27, and 29-33 as obvious (35 U.S.C. §103) over Kracht (U.S. Patent No. 6,377,987) in view of Suzuki (U.S. Patent No. 6,496,484). Applicants traverse with respect to the amended claims.

Amended claims 1, 11, 19, and 22 require: generating local topology information including information on local interfaces in a local device and remote interfaces in at least one downstream remote device that connect to the local interfaces identified in the local topology information, wherein the at least one downstream remote device comprises an end device or expander connecting to further end devices or expanders to which the local interfaces connect; for each connected remote interface, determining a device type of the downstream remote device including the remote interface; and for each local interface attached to one remote interface in one of the downstream remote devices whose determined device type is of a specified device type, initiating communication with the remote interface to access remote topology information from the downstream remote device indicating downstream devices attached directly and indirectly to the remote device, wherein the downstream devices with respect to the remote device comprise an end device or expander connecting to further end devices or expanders to

which the remote device connects, and wherein the communication with the remote device to access the remote topology information causes the remote device to gather remote topology information indicating downstream devices attached directly and indirectly to the remote device, to periodically check whether the gathering of the remote topology information has completed, and to return the remote topology information to the local interface in response to determining that the gathering has completed.

Applicants amended these claims to clarify the claim language of what the remote device performs in response to the communication by reciting that the communication causes the remote device to gather remote topology information indicating downstream devices attached directly and indirectly to the remote device, to periodically check whether the gathering of the remote topology information has completed, and to return the remote topology information to the local interface in response to determining that the gathering has completed.

The Examiner cited col. 3, lines 52-66, col. 4, lines 8-9, col. 8, lines 8-9 and 64 to col. 9, lines 4-7, col. 4, lines 8-9, and col. 10, lines 29-42, col. 3, lines 63-67, col. 4, lines 4-9, col. 11, lines 10-11 and col. 17, lines 26-27 of Kracht as teaching the pre-amended claim requirement of initiating communication (OA3, pg. 4), which now recites for each local interface attached to one remote interface in one of the downstream remote devices whose determined device type is of a specified device type, initiating communication with the remote interface to access remote topology information from the downstream remote device indicating downstream devices attached directly and indirectly to the remote device, wherein the downstream devices with respect to the remote device comprise an end device or expander connecting to further end devices or expanders to which the remote device connects, and wherein the communication with the remote device to access the remote topology information causes the remote device to gather remote topology information indicating downstream devices attached directly and indirectly to the remote device, to periodically check whether the gathering of the remote topology information has completed, and to return the remote topology information to the local interface in response to determining that the gathering has completed. (OA3, pg. 4)

The cited col. 3 mentions determining a physical topology of a network by discovering devices, creating and storing information representing the devices, determining neighboring devices for each of the devices, and processing information to eliminate devices that are not a neighbor of the devices to create information representing true neighboring devices and links.

The cited col. 8 mentions determining whether a device is a hub, router or switch. The cited col. 10 discusses how a router creates an address translation table in which address information is recorded.

Although the cited Kracht discusses how configuration information on neighboring devices is determined, there is no teaching of the claim requirement that this is accomplished by initiating communication with the remote device to access the remote topology information that causes the remote device to gather remote topology information indicating downstream devices attached directly and indirectly to the remote device, to periodically check whether the gathering of the remote topology information has completed, and to return the remote topology information to the local interface in response to determining that the gathering has completed. For instance, the cited Kracht discusses how configuration information is obtained from known devices, but does not teach that this is accomplished by sending a request to a remote device to cause the remote device to gather remote topology information, to periodically check whether the remote device gathering has completed, and return the remote topology information when gathering has completed.

The cited col. 3 further mentions determining neighboring devices and storing information on the represents the topology. The cited col. 4 mentions determining neighboring devices by sending information to collect configuration information from the plurality of devices identifying network addresses received on ports of the devices. The cited col. 11 mentions discarding false information and the cited col. 17 mentions that the topology is generated based on collected and processed information.

Although the cited Kracht discusses how to gather configuration information from neighboring devices and generating topology on that, there is no teaching or suggestion that the remote device, in response to the communication, gathers remote topology information, periodically checks whether the gathering has completed, and returns the remote topology information when gathering completed. There is no teaching in the cited Kracht that the neighboring devices from which information is collected wait to complete gathering their connection information by periodically checking before returning their configuration information.

The Examiner found that Kracht does not teach the periodically checking whether the remote device gathering has completed, and cited col. 2, lines 59-67 and col. 6, lines 5-16 of Suzuki as addressing this recognized shortcoming.   (OA3, pg. 4).  Applicants traverse.

The cited col. 2 discusses how if a new host connects to the network, a routing server sends an update notifying message to the routing nodes to update their address learning tables with the new address information.  The routing nodes send an update complete message to the routing server when the table is updated.  The routing server sets a timer to check that all the routing nodes received an update message request before the timer expires.   The timer stops when the routing server receives an update complete message from all the nodes.   If the timer expires without receiving the update complete message from all the nodes, then the routing server sends the update request message to the routing nodes again.

Nowhere does the cited Suzuki teach or suggest communicating with a remote device to cause the remote device to gather remote topology information from downstream devices, to periodically check whether the gathering is completed, and return the remote topology information when gathering is completed. Instead, the cited Suzuki discusses how a router server sets a timer to make sure all receiving nodes have receives information on an address update. The Examiner has not shown where Suzuki teaches that the cited routing server communicates with the routing nodes to cause the routing nodes to gather information on connected downstream devices, periodically check whether the gathering has completed, and return the gathered information when gathering completed.  Instead, the cited Suzuki discusses how the routing server makes sure routing nodes receive updated address information.

Accordingly, the amended claims 1, 11, 19, and 22 are patentable over the cited art because the cited combination of Kracht and Suzuki does not teach or suggest all the requirements of these claims.

Claims 2-9 and 11-15, 20, 21, and 23-26 are patentable over the cited art because they depend from one of claims 1, 11, 19, and 22, which are patentable over the cited art for the reasons discussed above.  Moreover, the following dependent claims provide additional grounds of patentability over the cited art.

Independent claims 16 and 27 substantially include requirements concerning the periodically checking whether the remote topology information is completed and transmitting

when completed to the upstream device. These requirements, among others, distinguish over the cited art for the reasons discussed with respect to claims 1, 11, 19, and 22. See, OA3, pgs. 5-6.

Amended claims 30-33 depend from claims 1, 11, 19, and 22 and further require that the initiated communication with the remote device comprises sending only one discovery request to the remote device to cause the remote device to perform the gathering, periodically checking, and returning of the remote topology information indicating the downstream devices directly and indirectly connected to the remote device.

Applicants amended these claims to clarify the claim language as discussed above to overcome the objection.

The Examiner cited col. 3, lines 58-67 and col. 4, lines 6-12 of Kracht as teaching the additional requirements of these claims. (OA3, pg. 9) Applicants traverse with respect to the amended claims.

The cited col. 3 mentions determining a physical topology of a network by determining possible neighboring devices for each device, processing configuration information to eliminate devices that are not actually a neighbor to create information representing true neighboring devices and the links between them. The cited col. 4 mentions determining possible neighboring devices by sending requests to collect layer 2 and layer 3 configuration information from the devices. The configuration information identifies the network addresses that are received on what ports.

Nowhere do the cited cols. 3 and 4 teach or suggest sending only one discovery request to a remote device to cause the remote device to perform the gathering, periodically checking whether gathering has completed, and returning gathered remote topology information when completed. Instead, the cited cols. 3 and 4 mention how to determine neighboring devices. However, this discussion of determining information on neighboring devices does not teach the use of only one discovery request to cause gathering, checking, and returning as claimed.

Accordingly, claims 30-33 provide additional grounds of patentability over the cited art because the additional requirements of these claims are not taught or suggested in the cited combination of Kracht and Suzuki.

2.      Added Claims 34-41

        Added claims 34 and 35 depend from claims 16 and 27, respectively, and include the requirements of claims 30-33, with changes to integrate with the requirements of the base claims 16 and 27. The added requirements of these claims are disclosed in at least para. 20 of the Specification.

        Claims 34 and 35 are patentable over the cited art because they depend from base claims 16 and 27, which are patentable over the cited art for the reasons discussed above, and for the additional reasons of patentability discussed above with respect to claims 30-33.

        Added claims 36-39 depend from claims 30-33, respectively, and further require that the local device is directly connected to the remote device, and wherein the local device, remote device, and other downstream devices directly and indirectly attached to the remote device are connected using a serial network technology.

        Claims 40-41 depend from claims 34 and 35, respectively, and further require that the at least one local interface is directly connected to the upstream device, and wherein the upstream device, the at least one local interface, and the downstream devices are directly and indirectly attached to the at least one local interface are connected using a serial network technology.

        The added requirements of these claims are disclosed in at least paras. 6-9 of the Specification.

        Claims 36-41 are patentable over the cited art because they depend from base claims 1, 11, 19, and 22, which are patentable over the cited art for the reasons discussed above and because the additional requirements of these claims in combination with the base claims provide further grounds of patentability over the cited art.


                                    Conclusion

        For all the above reasons, Applicant submits that the pending claims 1-4, 6, 9-13, 15, 16, 18-24, 26, 27, and 29-41 are patentable.  Should any additional fees be required beyond those paid, please charge Deposit Account No. 50-0585.

\\

\\

\\

The attorney of record invites the Examiner to contact him at (310) 553-7977 if the Examiner believes such contact would advance the prosecution of the case.


Dated: July 6, 2009                    By:_____/David Victor/_____

                                              David W. Victor
                                              Registration No. 39,867
                                              Tel: (310) 553-7977